# REVIEW.

ART. XIII.—*On Diseases of Menstruation, and Ovarian Inflammation, in connection with Sterility, Pelvic Tumours, and Affections of the Womb.* By EDWARD JOHN TILT, M. D., Physician to the Farrindon General Dispensary, and to the Paddington Free Dispensary for the Diseases of Women and Children. "Omne animal ab ovo." 12mo. pp. 250. London, 1850.

THE importance of the ovaries in a physiological point of view renders the investigation of their several pathological conditions, with their direct and remote results, a subject of deep interest. Being the organs by which, in the female, the act of reproduction is effected, it might be inferred, *à priori*, that when they become involved in disease, not only will their immediate function be suspended, or perverted, but that derangement will, also, occur in all the acts accessory to that of reproduction; many of those affections which have, heretofore, been considered as dependent upon a morbid condition of the uterus, being, in fact, the result of disease of the ovaries—the uterus becoming involved only secondarily. Dr. Tilt, in the work before us, has endeavoured to show that the inference thus derived from the physiological rank of the ovaries is established by the result of repeated clinical observations, and has pointed out the several ways in which sterility is produced by the action of inflammation on the ovarian tissues; the great importance of ovarian peritonitis as a cause of disordered menstruation; and the influence of ovarian inflammation in the production of uterine disease; illustrated by numerous cases derived from his own observations, and those of other practitioners, British and Continental.

The work is one which deserves to be closely and candidly studied by every physician engaged in the general duties of his profession. Although the author may, perhaps, have carried his views in reference to the results of the pathological states of the ovaries somewhat beyond what the observations adduced by him strictly warrant, still, of the general accuracy of the doctrines and practical instructions presented by him, little, if any, doubt can be entertained. No one, we are persuaded, can fail to derive from the careful perusal of the present treatise much valuable information in relation to a class of diseases of frequent occurrence, the pathology of which has, heretofore, been involved in obscurity, while their treatment, to say the least of it, has been uncertain and empirical.

In an introduction of some twenty pages, the author discusses cursorily the questions: why should medicine be uncertain? what are diseases of menstruation? what is menstruation? what are the organs of menstruation? what is inflammation? and, by what influence does inflammation in the ovarian tissues produce diseases of menstruation? A prolegomenon follows, occupying thirty-nine pages, devoted to a consideration of the extraordinary confusion relative to the history of ovarian inflammation; of its frequency, as proved by the frequent detection of inflammatory morbid lesions in the ova-

ries; of the reasons for the past neglect of ovarian pathology, and for the pre-eminence traditionally assigned to the uterus amongst the organs of reproduction; of the difficulty of exploring organs so small and so deeply seated as the ovaries; of the similitude of the leading symptoms of subacute ovaritis to those of inflammation of the womb; of the popular conviction that menstruation is a natural function, for the evils attendant upon which there is no remedy, and of the repugnance of patients to submit to, and of physicians to press for an examination; followed by a sketch of ovarian bibliography from the time of Actius to the present day, showing that medical authors, ancient as well as modern, have described the puerperal form, some few moderns the acute idiopathic, but that none have investigated the subacute form of ovarian inflammation, although many have given hints, suggestions, &c., of the existence of this form of disease; the whole concluding with an account of the different modes of ovarian exploration—abdominal, vaginal, rectal, and these two latter conjoined.

As the practice of these modes of exploration are essential to the attainment of a certain diagnosis in cases of ovarian disease, we had marked the author's account of them for insertion in the present notice, but have been obliged, in consequence of its length, to omit it.

The first five chapters of the treatise are devoted to a consideration of subacute ovaritis; its causes, symptoms, terminations, and treatment.

Dr. Tilt defines this form of ovarian inflammation, as follows:—

"Swelling of the ovaria, with increase of heat, and pain upon pressure, accompanied by intermittent or permanent pain, or uneasiness in the ovarian region, radiating to the loins and thighs, and producing, according to the constitution of the patient, an arrest of menstruation or its profuse flow, intense local pain, or hysterical symptoms.

"By *subacute* inflammation, as distinguished from *acute*, he does not so much imply a difference in the intrinsic nature of the morbid phenomena, as a limitation of the inflammatory action to certain distinct parts of the ovaries, as the ovarian follicle, and to portions of the ovarian tissue so small that they give rise to little swelling, and to no febrile action."

After pointing out the predisposition of the ovaries to inflammation, resulting from their anatomical structure and their condition during ovulation, the author proceeds to describe the pathological anatomy of subacute ovaritis. He first notices the frequent occurrence of adhesions, false membranes or thickening, in that portion of the peritoneum covering the generative organs in the female; with loss of transparency, or a spotted or striated suffusion of the subjacent cellular tissues, caused by the infiltration of a thick opaque serosity, of a white, pink, or yellow colour, or their distension with a gelatinous fluid.

The condition of the ovary itself is thus described:—

It is "slightly increased in size, or double its usual dimensions, resisting and elastic; on pressure, it yields a sensation of fluctuation; its surface is smooth, polished, and glistening; its tissue more red than natural, though less resisting; congested with blood, as described by Negrier, or moist with a sero-viscous fluid." "It is traversed by a number of smaller vessels, especially in the neighbourhood of the cells, which, placed at the surface of the organ, contain ovules, and may be healthy or diseased.

"The vesicles have been found presenting *individually* evident signs of all the different stages of inflammation, although surrounded by a perfectly healthy stroma; the parietes of the vesicles have been found highly vascularized, so as to look like red currants, friable, lined with false membranes or full of well-formed pus; intimate but unerring testimonials of previous inflammation. The proof of their chronic inflammation has still more frequently been

observed. They may be hypertrophied, of the size of a pea or larger, round, or falciform, with an extremely dense white internal membrane, having a polished surface, of the thickness of parchment. They may also be found pellucid, having interposed between them and the parenchyma of the gland one or two other distinct membranous layers, with or without intermediate granular matter. They may contain either a green, yellow, or fatty liquid, or a pulpy substance, like the interior of an encephaloid cyst, or even solid saline concretions, as observed by Morgagni. The vesicles are sometimes found, on the contrary, atrophied and blighted; their liquid contents being partly absorbed, the follicles are no longer fully distended, but look like wrinkled sacs, of a white or grayish colour; and here we may observe that, however difficult it may be to understand, inflammation is known to cause sometimes hypertrophy of the ovaria, while, at other times, under the same mysterious influence, the ovaries of young women have been found as hardened and collapsed as those of women who have outlived the period of active ovarian life. These white bodies and cysts are never observed before menstruation; but they may be met with in every other stage of life, in virgins as well as in prostitutes. From the nature of these lesions, which are evidently inflammatory, we are able to infer the relative frequency of various stages of inflammation in one or more of the ovarian follicles."

"When subacute ovaritis occurs in the puerperal state, the ovaries are found greatly increased in size, their tissue becomes more friable, and infiltrated with yellowish or violet-coloured serum, sometimes resembling that of the spleen, but at other times it is more infiltrated with serum, slightly tinged with blood. In recording these lesions, and ascribing to them their due value, we must not, however, forget that the ovaries may be partially, and even seriously inflamed, without the power to perform their proper functions being permanently compromised."

"The liability of the Fallopian tubes to inflammation is proved by their often presenting undoubted traces of its having existed. This is not only the result of our own experience, but is confirmed by the testimony of those who, like Dr. Ashwell, Dr. R. Lee, and Professor Cruveilhier, have attended to lesions of the ovaries, and of their ducts; and Dr. Hooper, in the few pages prefacing his admirable delineations of uterine and ovarian disease, does not hesitate to say that the Fallopian tubes are frequently found to have suffered from inflammation! Their inflammation is almost always a consequence of ovaritis or metritis, and is confounded with these diseases exactly in the same way as Fallopian cysts are confounded with ovarian—a confusion of diseases which, as the same treatment is required in both cases, is indeed of but little consequence. As regards the morbid conditions which have been noticed, the fimbriæ may be found preternaturally florid, highly vascular, filled with blood, attached by recent false membranes to the ovaries or adjacent organs, or bound down to the same by firm, thick bands of long standing. The fimbriæ of both Fallopian tubes may be found destroyed, but in general those only of one or the other are seen to be totally so.

"This is a lesion of very frequent occurrence (Dr. Hooper), and with it generally coincides the obliteration of that extremity of the tube by which it communicates with the peritoneal cavity. The oviducts then terminate in a cul-de-sac; they are also increased in size, and are mostly tortuous, or of a pyriform shape, and their sides are thicker than usual, and fluctuating when pressed. On being opened, they are found to contain a serous, albuminous, puriform, or bloody fluid, and their internal surface is covered with tenacious or flocculent albuminous substance, the removal of which exposes tissues which are inflamed and softened. We may here observe that, however frequently obliterations of the Fallopian tubes may have been found, their imperforation, whether congenital or accidental, has been very seldom met with. A web of false membranes has been often discovered lining the interior of the oviducts of prostitutes, and of those women who have recovered from puerperal metroperitonitis; whereas the same tubes are often found full of mucus, or even pus, in those who have died in the acute stage of the disease."

"In some cases, the oviducts may be perfectly healthy, and still unable to perform their allotted task, owing to the existence of false membranes, by which they may be glued to the neighbouring viscera, so as to preclude the possibility of their precise adaptation to the ovaries. Varying in density from that of the finest diaphanous film to that of strong ligamentous bands, these false membranes are of very frequent occurrence; and, in prostitutes, the ovaries and Fallopian tubes are seldom found without some one or other of the lesions already described, if we may rely on the testimony of Walker, Renaudin, and Dr. Oldham."

In regard to the causes of subacute ovaritis—Dr. Tilt refers to the nature and functions of the genital organs as the principal circumstances which predispose to the disease. The periodical congestion of the ovaries predisposes them, when from any cause this congestion is carried to a greater degree than ordinary, or is protracted beyond the usual time, to an attack of inflammation. In many of the published cases of ovaritis, we find, accordingly, that the disease came on at the time and instead of the menstrual discharge. It is more particularly liable to occur in women who are nervous, irritable, hysterical, and of a scrofulous habit. Dr. T. has not been able to verify the remark of Retzius, that women of a certain age, who have borne children, but have not suckled, are often attacked with ovaritis. Excess in sexual indulgence is not unfrequently a cause of subacute ovaritis in newly married women; but the disease is more especially the sequel of inordinate sexual intercourse in prostitutes. Walter and Renaudin state, as the result of their experience, that the ovaries of prostitutes are seldom without some morbid lesions, an assertion recently confirmed by Dr. Oldham.

"The privation of sexual stimulus is no doubt a cause of certain forms of subacute ovaritis; whether we consider its absolute privation in healthy women, whose feelings and passions are strong, or its sudden denial to those accustomed to its indulgence, as in young widows, whom Hildenbrand considers to be often attacked with this complaint, or as in prostitutes when placed in confinement. In such cases, the cerebro-spinal sympathies are called into active play, and hysteria masks its local cause. Marriage late in life is sometimes of itself a sufficient cause of subacute ovaritis. It seems as if the ovaria, having been debarred their proper stimulus when most needed, become so accustomed to the privation, that when the stimulus is at last presented to them it produces a morbid impression. Subacute ovaritis is also one of the pathological elements of that state, truly described as the critical time in the life of woman, and then, in most cases, it reacts on the uterus so as to produce those sudden floodings which so often terminate menstruation. If this be not the case, the periodical congestion, which has lasted for so many years, does not at once subside; it still exists long after the menstrual flow has ceased; and as this ovarian congestion is not relieved by its accustomed discharge, the ovaries are liable to inflammation, if such a result be not carefully warded off by repeated purgatives and judicious bleeding, according to the practice of our medical forefathers; a practice, perhaps, too much neglected in our own day."

Among the other causes of ovaritis, Dr. T. enumerates all those habits of life, and artificial excitements, which tend to exaggerate the impulse of unsatisfied desires; the disease in such cases being sometimes characterized by the development of hysteria. Nonat has twice seen acute ovaritis in the virgin.

The left ovary seems more liable to inflammation than the right; in seventeen cases, Dr. T. found the right ovary affected in only five. Roux has pointed out the congenital shortness of the vagina as being not an unfrequent cause of ovarian and uterine inflammation in those who are placed under matrimonial influences.

Among the exciting causes, Dr. T. enumerates falls on the feet, knees, or sacrum; violent jolting on horseback or in riding immediately after menstruation; the necessity for instrumental aid in parturition; disproportion between the child's head and the pelvis of the mother. A first confinement is a most important cause; in 25 out of Mr. Bell's 45 cases of pelvic tumours, and in 15 out of Mr. Taylor's 32 cases, they occurred in primiparæ. A very rapid delivery, and the tearing away of the placenta, have also appeared to bring on ovaritis. Styptic and stimulating injections into the cavity of the womb act also as an exciting cause. Retention of the menses, either from congenital occlusions of the vagina or uterine aperture, or accidentally induced by the blocking up the passage of the vagina from the pressure of tumours, or by the obliteration of the os uteri after parturition, or from the imprudent cauterization of its internal surface, or its closure, resulting from inflammatory tumefaction, or spasmodic contraction of the cervix—the two latter being a common result of cold externally applied, or cold drinks or ices imprudently taken into the stomach. Venesection, drastic purgatives, emetics, sexual intercourse, fever, mental perturbation or excitements, immediately before the occurrence of menstruation, are liable to cause the suppression of this discharge, and to induce subacute ovaritis, accompanied by dysmenorrhœa, or hysterical symptoms. When from any of these causes the menses are suddenly arrested during their flow, the subacute ovaritis they may produce is attended by engorgement of the uterus.

"The retention or suppression of the menses has, according to Dr. T., a twofold influence in the production of ovaritis, and it may be added, disease of the pelvic organs in general—first, by the retention of what was to have been excreted, and the consequent congestion of the organs which secrete the menstrual discharge; secondly, by the arrest of the ovarian discharge and the subsequent oppression of the system by some reflected influence of a nervous kind."

Catarrhal disease, and extensive ulceration of the neck of the womb, are also enumerated as causes of subacute ovaritis. The disease is likewise often an attendant upon metritis: sometimes the two coexist, and then the former is masked by the symptoms of the latter.

"M. Gendrin, whose name carries weight in such matters," Dr. T. remarks, "states that he has often seen cases of ovaritis and uterine engorgement, and metro-peritonitis, caused by deep cauterization, and in some instances even by the use of the nitrate of silver to the neck of the womb, or by styptic injections. But we have not only to fear the propagation of inflammation on account of the idiosyncrasy of the patient, or from the injudicious use of active escharotics, but likewise from the employment of various mechanical means which have lately been invented, and are now so much in vogue. The ordinary pessaries effect no good purpose, while they give rise to great irritation, and are as irrational as they are disgusting.

"We agree with Dr. Hervez de Chegoin that sometimes retroversion of the womb, by its pressure on the ovarics, may greatly irritate them; but we think Dr. Rigby has exaggerated the importance of this cause of ovaritis, and that in many cases the use of the stem pessary, without curing the retroversion, prolongs ovarian and uterine irritation. We have so often seen this to be the case that, without denying the good results which may have followed the use of the stem pessary in more skilful hands, we do not intend again to employ it. And when we remember that many of the uterine deviations and reflexions are *congenital*, as Mr. Jobert de Lamballe has well proved, and therefore beyond the pale of treatment, or else of so long a standing that they cannot be permanently *redressed;* and that in the majority of cases they are perfectly *harmless*—a fact which has been lately brought into the strongest relief by Professor Paul

Dubois, Hervez de Chegoin, and been received without contradiction in the important discussion on uterine disease now proceeding in the Acadêmie Nationnle de Médecine—finally, when we consider the mischievous effects often entailed by the employment of the stem pessary, and the fatal result it determined in the case reported by Mr. Bransby Cooper; we think our resolution is well founded, and, using the words of an anonymous writer, we are tempted to say 'that it is scarcely consistent with right principle to seek a doubtful good by means which have been proved to be fatally dangerous even in well-skilled hands."

As specific causes of ovaritis, Dr. T. enumerates the puerperal state, the rheumatic diathesis, and blennorrhagic infection.

The symptoms of ovaritis are, a dull pain in the ovarian region, brought on by walking, riding, or any sudden movement, or even by pressure on the side. The pain is increased in the erect posture; it extends across the loins and towards the thighs and fundament; it is then of a dull, dragging, heavy, and sometimes of an overwhelming nature. It is, however, seldom so acute as to induce the patient to seek for advice. If the patient is married, connection awakens and renders the pain more or less acute. The hands placed on the iliac regions can sometimes detect an increase of heat. Twice, Dr. T. has seen swelling of the left side coinciding with pain and swelling of the left ovary. There is frequently tenesmus, a desire of passing water, or an inability to do so, or bearing-down pains and impossibility to pass the fæces. In these cases, by a vaginal exploration, an increase of heat in the upper portion of the passage may be discovered.

"But, we are told, unless the ovaries are considerably swollen, their increase of dimensions will not be detected by this mode of investigation. It may, however, afford an indirect intimation of diseased ovarian action: thus, if one of the ovaries be inflamed, the patient's sufferings are greatly increased by forcibly inclining the neck of the uterus towards it, so as to direct the fundus uteri to the opposite side. The exasperation of the patient's sufferings is then caused by the stretching of the inflamed broad ligament. If both ovaries are inflamed, slight lateral movements, communicated to the uterus by its neck, will greatly increase the pain felt in the ovarian regions. More direct evidence may, however, be obtained by a rectal exploration, for then the finger reaches the ovaries, and finds them more or less painful on pressure, which is not the case when these organs are in their healthy state. They are found to vary from twice to four times their original size.

"The most painful sufferings are produced by the descent of the ovarian swelling, of about the size of a small apple, into the recto-vaginal cul-de-sac, thus impeding defecation, or bearing down the uterus, so as to produce its complete retroversion. Such cases have been noted by Boivin, Denman, M'Intosh, and Dr. Rigby.

"General symptoms are sometimes absent, but in the more acute cases the local signs of inflammation are accompanied by slight fever at night, thirst, and a furred tongue, nausea, and sickness."

The description of the symptoms of the puerperal variety of subacute ovaritis Dr. Tilt quotes from the paper of Dr. Doherty. After perhaps an easy labour, and when convalescence has proceeded uninterruptedly for some days or even weeks, the female, after being exposed to the influence of cold, is seized with shivering, succeeded by hot skin, quick pulse, and a dull weight about the pelvis. The febrile symptoms disappear after a few hours, and the uneasy sensation about the lower part of the abdomen is insufficient to excite any apprehension in the mind of the patient, and thus a considerable space of time may pass over. Febrile paroxysms, however, recur at intervals, and, finally, becoming more frequent, while stiffness and pain are felt on moving the leg of the affected side, advice is again applied for.

"By a careful examination," remarks Dr. T., "the local disorders already described will be detected; but the ovarian congestion will be more considerable than in the idiopathic variety, and will be accompanied by considerable seropurulent infiltration of the adjoining cellular tissue, and even of the vagina, which gives to the finger the sensation of a dense brawny substance, particularly in its anterior curve."

The author next proceeds to consider the different accessory symptoms, by which, in different women, subacute ovaritis may be attended, according as the inflamed ovaries react on a womb more or less excitable, on a nervous system differently prone to respond to irritation, or on fluids, more or less, or differently, vitiated by the unknown cause of scrofula, &c. This is done under the heads of the amenorrhœal, dysmenorrhœal, menorrhagic, and hysterical types of ovaritis.

We cannot follow the author in his interesting remarks in reference to each of these forms of the disease. Though concise, they are appropriate and highly plausible. The views advanced by him cast a new, and, we believe, a very important light upon the pathology of many of the diseases of the sexual organs in the female.

It can scarcely be doubted that ovaritis, particularly in its subacute form, is of more frequent occurrence than is generally suspected; that to it are to be referred, in numerous instances, the derangements of the menstrual function, is susceptible, we think, of very strong proof, derived as well from the received views of the physiological functions of the ovaries as from facts based upon an analysis of the history and symptoms of the cases in which the menstrual flux is deficient, painful, or in excess, and from the lesions discovered in the ovaries after death. Much of the uneasy sensations and sufferings in females which are attributed to disease of the womb, and which are, in vain, attempted to be relieved by remedial measures directed solely to that organ, are unquestionably the results of ovarian inflammation, and are to be removed only by means calculated to cure the latter. Dr. T. deserves the thanks of the profession for directing its attention, by the preparation of the work before us, to the importance of ovarian pathology and the necessity of its more complete investigation.

As terminations of subacute ovaritis, are enumerated 1st, sterility—which it produces, according to our author, by accelerating the shedding of imperfectly developed ova; or by causing the retention of blighted ova, in consequence of their transmission from the ovaries to the uterus being impeded by a blocking up of the Fallopian tubes with mucus; 2dly, uterine inflammation.

"The powerful influence of subacute ovaritis as a great cause of congestion and hardening of the womb has been shown by Drs. Oldham and Rigby. Under this influence," remarks Dr. T., "the uterine surface secretes membranes which, when compared with those cast off in cases of abortion, are found identical; but this is not all, for the texture of the womb becomes altered. In recent congestion, the posterior wall feels soft, compressible, and painful to the touch; but, after repeated engorgements, the tissue becomes harder, more solid, very much like the tissue of an *erectile* tumour, or that of a fibrous growth. Thus enlarged, the womb becomes liable to retroversion, and sometimes even, when the womb is thus displaced, it excites inflammation in the neighbouring peritoneum; false membranes are then formed which fix the womb, and an irreducible retroversion is the result.

"That ovarian irritation may determine the engorgement of the neck of the womb is proved by a case lately published by Professor Récamier (*Gaz. des Hôpitaux*, Feb. 22, 1850)."

In proceeding to lay down the treatment proper in cases of subacute ovaritis, Dr. T. cautions against any attempt to remove the disease by active remedies administered during the exacerbation produced by menstruation. The time for their administration is during the intervals between successive epochs. Leeches are recommended over the ovarian region, as much as possible at the seat of pain. They should be sufficient in number to make a decided effect on the local inflammation, and should be followed immediately by hot poultices or fomentations. The number and repetition of the leeches must be left to the discretion of the medical attendant. Dr. T. objects to the application of leeches to the os uteri or to that portion of the rectum which covers the ovaries.

Purgatives are useful both to counteract all tendency to inflammation and to remove from the vicinity of the ovaria any causes of mechanical irritation, as retained fæces, morbid intestinal secretions, &c. The saline and oleaginous articles are preferred; irritating and drastic purgatives are counter-indicated, excepting in certain cases of the amenorrhœal type.

Enemata composed of 15 ounces of aqua camphora, of 6 drachms of aqua lauri cerasi, with sometimes the addition of 3 drachms of the tinctura hyoseyami, Dr. T. considers as most valuable addenda to the preceding remedial measures. He sometimes substitutes the tincture of belladonna or of opium for that of hyoseyamus.

"With respect to this administration of injections," says Dr. T., "the bowels having been previously opened, or else an injection of water having been made, four or five ounces of the tepid enema should be injected slowly into the rectum, the patient being told to retain it as long as possible, and lying on her back, so that the pelvis may be somewhat higher than the rest of the body. This injection should be repeated three or four times a day; and when we consider that the liquid injected is separated from the inflamed ovaries only by a thin elastic and highly absorbent membrane, it will not be difficult to understand that enemata, thus carefully given, are productive of the greatest advantage. When the patient is cured, the medicated enemata should be discontinued, and replaced by cold water, to be likewise injected into the rectum morning and night. By cold water, we mean that which has stood in an inhabited room, and which, when introduced, gives an impression of cold, without chilling the patient. We do not know of any means better calculated to reduce the exaggerated ovarian irritation; and, while treating of this subject, we may remark on the powerful effect of cold water enemata in arresting a tendency to hysterical seizures, and in suddenly removing them where they already exist."

"Vaginal injections are also useful. We agree with Cullerier, sen., and with Lisfranc, in ascribing no great utility to narcotic vaginal injections, which rather irritate the tissues than subdue their inflammation. They are, however, useful in the hysterical type, as stated by Brière de Boismont."

When the leech bites are healed, Dr. T. directs blisters, of four or five inches in length by three in breadth, and carefully camphorated to prevent dysuria, to be applied over the ovarian regions. The epidermis is not to be removed, and the irritated surface should be healed as soon as possible. The antimonial ointment, as recommended by Dr. Rigby, is also beneficial when applied over the same region.

Mercurial frictions have been recommended by M. Boivin in cases attended with inflammatory adhesions of the broad ligaments, dysmenorrhœa, pains, constipation, and tendency to abortion. Dr. Granville has also cured the tendency to miscarriage resulting from ovarian irritation, by combining the internal use of castor oil with mercurial frictions. Dr. T. has derived increased benefit from mercurial frictions by combining with the ointment extract of hyoscyamus, belladonna, and opium, in the proportion of a drachm of the ex-

tracts to an ounce of the ointment. He is also in the habit of combining camphor with the mercurial ointment.

While Dr. T. objects to the inunction of iodine ointment to the roof of the vagina, as practiced by Dr. Kennedy, he states that he has sometimes derived advantage from the medicated pessaries recommended by Dr. Simpson. The following formula may be employed: Extract of belladonna, 2 drachms; camphor, 10 grains; yellow wax, 1½ drachm; lard, 6 drachms,—or strong mercurial ointment, 2 drachms; extract of belladonna, 1 drachm; yellow wax, 2 drachms; lard, an ounce. In some cases, iodide of potassium 1 drachm, or acetate of lead 2 drachms, for each pessary, may be found beneficial.

In cases occurring in females of a nervoso-sanguine temperament, baths of water sufficiently warm not to chill the patient are a useful remedy. The proper temperature of the bath should be maintained by the constant renewal of the warm water, so that the patient may remain immersed for at least an hour.

It is important that, at first, the patient be confined strictly to a horizontal position, and subsequently for two or three hours in the middle of the day.

"It is necessary to say that the general treatment of the patient should be such as will invigorate the constitution, without increasing the local irritation, and the determination of blood to the pelvic organs. The protection of the feet from damp is of course a point of great importance: but what is of still more consequence, in a fitful climate, is effectually to protect the pelvic organs by drawers."

If the patient be married, sexual indulgence must be abstained from so long as there are any signs of ovarian inflammation, and afterwards permitted only in moderation.

In the puerperal variety of subacute ovaritis, the above treatment should be enforced with greater care, on account of the liability of the patient to more serious local disorder. Dr. T. does not approve of the recommendation to remove the child from the breast. Keeping up the action of the mammary glands he believes to be preferable to its arrest.

We pass over the short but pertinent remarks of our author in relation to the treatment of the amenorrhœal, dysmenorrhœal, menorrhagic, and hysteric types of subacute ovaritis. In speaking of sterility resulting from obstruction of the Fallopian tubes by mucus, Dr. T. condemns the proposition that has been made by Dr. Tyler Smith for deobstructing these tubes by an instrument to be passed into them at their openings into the uterus and carried onwards to their fimbriated extremities.

*Acute ovaritis* Dr. T. defines as follows:—

"Considerable swelling of the ovaria, and the surrounding cellular tissue, with formation of pus, its elimination or absorption."

"If the inflammatory process has been sufficiently intense, or has not been actively treated, the ovaria in the course of a few days swell to a considerable bulk," "and contain pus, either infiltrated in the tissue of the organ, or disseminated in its various parts. These purulent deposits scattered through the ovaries have been described by Negrier, and considered as inflamed Graafian cells, filled with pus of their own secreting." "These small cavities may communicate, or the central part of the ovary may be broken down, nothing being left but the ovarian shell filled with pus." "These collections of pus, if not artificially opened, have a tendency to empty themselves into the neighbouring organs, when they will be found to communicate, by fistulous passages, with various parts of the intestinal canal, with the bladder, or with the vagina, or to open into the peritoneal cavity. T. Bonnet, Shenkius, Merat, and Dr. Seymour have related cases wherein the ovaries were found to be in a state of

gangrene. We must remark that, in these acute cases of inflammation, the adjacent cellular tissue is also inflamed, and that this adds considerably to the size of the tumour, and to the extent of its suppuration; indeed, some authors think that pelvic tumours originate principally in the pelvic cellular tissue. The ovarian peritoneum is also implicated in the general inflammation. It is covered with false membranes, causing it to adhere to the neighbouring organs; and these adhesions, if the patient survive, are transformed into those solid bands which interfere with the play of the pelvic viscera, and frequently cause abortion.

"The coincidence of abscesses in the ovary and the corresponding oviduct was noticed by Morgagni, and afterwards by Andral, Dalmas, and Haaze." "Cruveilhier found both the ovary and the corresponding Fallopian tube distended with pus, the tube being adherent, and the ovary so softened in the vicinity of the adhesion that it would soon have allowed its contents to pass through the tube to the uterus."

"Pus may be found in the ovarian veins, though not so frequently as in the uterine. Cruveilhier considers the lymphatics to be more commonly distended with the pus they have absorbed." "These vessels have been sometimes mistaken for veins; but, when the pus is removed from the lymphatics, those structures appear perfectly healthy; whereas, when the veins are inflamed, their tissues are thickened, have become more fragile, and are lined with false membranes.

"The size of the tumour is often more considerable, and the stroma loses all trace of organization, being more or less changed into a milky, sero-purulent magma, or into a grayish sanious matter, or a vascular pulp, which is almost diffluent, and approaches very nearly to the condition of gangrenous decomposition, since it indicates the total disorganization of the ovarian tissue. In some cases of puerperal metro-peritonitis, Cruveilhier, Boivin, Dugès, Seymour, and Dr. R. Lee have found, on post-mortem examination, the different ovaries ruptured, without it being possible to ascribe the rupture to any violent traction; and the shreds of the organ, being mingled with pus and peritoneal effusion, have, no doubt, been described as the result of gangreno by the older authors."

"Another important pathological distinction between puerperal and idiopathic ovaritis is that in the latter the adjacent peritoneum is frequently not inflamed, and may for years form an efficacious boundary to ovarian disorders; but in the puerperal variety, as might have been presupposed, the ovarian peritoneum soon participates in, and often even originates, the disease."

Acute ovaritis is produced by the same causes as the subacute form, acting with more intensity or continuity, or on a constitution more susceptible to their influence.

The symptoms of acute ovaritis are pain increased by all movements of the body, but especially, by extension of the limb of the side affected. The pain is sometimes most acute. In a case mentioned by Dr. Ashwell, it was so intense that syncope was induced by the patient rising in bed to pass her urine. The pain may be either heavy and dragging, pulsating, or accompanied by a feeling as if a foreign body were boring its way through the vulva. If the ovarian region be examined, we can often see a tumour distinctly pointing from the side of the pelvis. There is an increase in the natural heat of the surface, of which the patient is herself frequently aware. Pressure increases the pain, and the extent of the tumour may, in some cases, be more or less distinctly felt; a sense of uneasiness or numbness in the limb on the same side as the tumour may also be present.

By a vaginal exploration, this passage will be found hotter than usual, dry, and not lubricated by mucus. The upper curve will sometimes be infiltrated, giving to the finger the sensation imparted by brawn.

"When the tumour is small, it generally subsides between the uterus and the rectum, or between the former organ and the bladder, and, in some rare cases,

not only presses on these organs, but actually forces down the fundus uteri, causing prolapsus of the viscus. In a case recorded by Mr. Jackson, the tumour was situated behind the rectum, which was consequently pushed forwards. If the tumour develop itself behind the uterus, it may press it against and above the pubis, thus producing, by its continued pressure, abnormal deviations, and atrophy of the womb; when the tumour has increased, and is no longer entirely in the vicinity of the vagina, having ascended towards the brim of the pelvis, valuable information respecting its position and nature may still be afforded by the finger, even though it cannot reach the seat of the disease. Thus, the tumour may depress the uterus to the right or to the left, or may flatten it against the pubis, causing its complete retroversion, and also rendering it impossible for the finger to attain the os uteri." "This cannot take place without elongating the vagina and urethra, altering their form and direction, and interfering with their functions; copulation may be impossible, the egress of the menstrual flux difficult; and, in a case related by Dugès, the pressure of a large tumour was such as to cause the total obliteration of the vagina. For similar reasons, micturition may be greatly impeded, and there are patients who can only pass water on reclining the body as much backward as possible. In some cases (Boivin, Laugier), it is necessary to depress the tumour, in order to pass the catheter; in others, a male catheter only can be made to penetrate into the bladder; and there are also cases where it is impossible to introduce this instrument at all. Sometimes we can only just feel the inferior segment of the uterus, and then we find that its usual mobility has been checked, or that it is bound down by the thickening and infiltration of the adjacent inflamed tissues, and thus rendered immovable in the pelvis.

"If the tumour has been allowed to increase, and if it has contracted adhesions with the uterus, it will, on rising above the brim of the pelvis, draw the uterus after it. In such cases, which are not of frequent occurrence, the impossibility of feeling the neck of the womb is easily explained."

Dr. T. remarks that, by a rectal examination, the conclusions of the previous inquiry will be confirmed, and thus, by the double touch, we have the means of establishing an accurate diagnosis of these often difficult cases.

"In the commencement of acute ovaritis, the dysuria is only sympathetic; but when the tumour has increased in size, should it fall between the bladder and the uterus, it may, as in the incipent stage of ovarian cysts, give rise to a most painful symptom, viz: the desire of passing water every minute. If the ovarian tumour becomes still larger, and occupies the pelvic cavity, the bladder will be diminished in size, and its fundus is generally pushed forward and above the pubes, when the catheter will not pass freely through the elongated urethra. After this explanation, it will not be difficult to understand, that the sudden suppression of the jet of urine when the patient bends forward, and its free flow when she throws herself backward, are indications of a pelvic tumour."

If the urine contain pus, it will throw some light on the case.

"In the early stages of idiopathic ovaritis, nausea, sickness, and sometimes constipation, are frequent accompaniments, depending, at first, on the irritation of the visceral peritoneum, and the temporary paralysis of the muscular coat of the intestines. When, however, the tumour has increased, and rests on the rectum, the patient is troubled by a more constant constipation, and by tenesmus. The pressure on the rectum is sometimes so great that the fæces are moulded into the form of a riband. If the tumour increases still more, it rises above the brim of the pelvis, and then the lower intestine is no longer compressed to the same degree. It is incumbent on the medical attendant to examine the fæces, as, by the appearance they may present, and the pus they may contain, important elements of diagnosis may be obtained."

"The general symptoms of acute ovaritis are, in the first stage of the complaint, similar to those which announce the process of suppuration in any deeply seated organ, such as shiverings, followed by fever of a remittent or continued

type, particularly when the symptoms of ovaritis merge into the more marked phenomena of acute peritonitis. In the worst cases, abundant perspirations, violent thirst, disordered stomach, delirium, coma, and complete insensibility to all pain, close the scene. Frequently, however, the patient amends, and the ovarian swelling diminishes; but, on account of the periodical turgescence of the ovaries, relapses occur; or else the inflammatory type lowers, and chronic ovaritis, or what we have called subacute ovaritis, is established."

It may then last for years, giving rise to menstrual derangements, or to leucorrhœa, consequent on the permanent congestion of the whole generative system.

*Tubal inflammation* is not to be distinguished by any peculiar symptoms from acute ovaritis.

The symptoms of the *puerperal* form of ovaritis are nearly the same as those already described. There is sometimes diminution or suppression of the lochial discharge; at other times, the lochial discharge, as well as the flow of milk, continues for several days after the appearance of fever. The pain is less intense, but there is a greater amount of swelling and of peritoneal inflammation, by the extension of which all the symptoms of puerperal fever are developed, and the local disease is, in this manner, effectually masked.

*Blennorrhagic* ovaritis is of rare occurrence. It is produced by the extension of inflammation by the Fallopian tubes, or by the direct application, through these tubes, of the blennorrhagic pus to the ovaries.

*Rheumatic* ovaritis is also of very rare occurrence. It is said to occur during the last months of gestation, during labour, and in the puerperal state, in consequence of the action of cold air on the excessively expanded, and often unprotected, parietes of the abdomen. In addition to the usual symptoms of the disease, it is sometimes attended by violent paroxysms of pain, and profuse perspirations.

Acute ovaritis may be confounded with metritis. This error is the more liable to occur from the fact that the one disease is often the result of the other. In metritis, however, there are more fever and sickness, and the tumour can generally be detected above the pubis. The pain is more constant, lancinating, and circumscribed, than in ovaritis. From puerperal hypertrophy of the womb, the diagnosis of acute ovaritis is still more difficult. It may be confounded also with cæco-iliac abscess; with feculent accumulations in the cæcum and sigmoid flexure of the colon; with simple abscess of the pelvic walls. The disease of the ovaries may also be obscured by the occurrence of inflammation of the fossa iliaca, or phlegmasia dolens. The diagnosis is to be made out by a careful attention to the history of the case, and manual examination by the vagina, rectum, and the double touch.

Acute ovaritis may terminate by resolution, or by elimination, when the abscess may open externally, generally in one of the iliac regions; or it may open in the vagina, in the intestines, in the bladder, or into the peritoneum, giving rise to peritoneal inflammation.

The treatment of acute ovaritis, as laid down by Dr. T., differs, at the outset of the disease, but little from that directed in the subacute form; though it will be necessary to carry out some of the curative measures with greater energy. From fifteen to twenty leeches are to be applied over the seat of the disease, and repeated, if necessary, after a short interval. When the bleeding from the leech bites has ceased, Dr. T. directs the ovarian region to be anointed with two drachms of the compound mercurial ointment, covering immediately the part anointed with a large linseed poultice. At the same time, he administers internally two or three grains of calomel, with or without the tenth of a grain of opium, every second or third hour. Blisters

in the early stage of the disease are inadmissible. Medicated clysters, as recommended in the subacute form, would be advantageous could they be administered without increasing, by the movement of the patient, her sufferings.

When there exists an inflammatory ovarian tumour with no manifest opening outwardly or inwardly, we may try the effects of the ointment recommended Jahn; 2 ounces of ung. hydrarg. combined with 3 drachms of potass. iodid. Dr. Rigby has used the tartar emetic ointment, rubbed into the inguinal regions, so as to produce sloughing. Horst gave, internally, sal. ammon. 1 ounce, tart. stib. 1 gr., decoct. taraxaci, 1 pint; a cupful every hour. Sadler applied a moxa over the ovarian tumour, and repeated it in five days after. Although cases are related in which each of these measures is said to have effected a resolution of the ovarian abscess, still we are to view this as a result of rare occurrence.

The most approved practice is for the surgeon, so soon as fluctuation becomes manifest, to open the ovarian abscesses at the place where they point, and whence, consequently, the pus can easily flow. By this procedure, the patient is immediately relieved from the pain arising from the inflammatory distension of the cavity, and from many other dangers, and she has a better chance of recovery.

The vaginal opening of the abscess—the most desirable; the rectal opening—which Dr. T. condemns; the opening through the parietes of the abdomen, are separately discussed, and the modes of procedure carefully described. For much valuable information on these important topics we must refer to the work itself. An analysis of the sections devoted to a consideration of the treatment of pelvic abscesses by incision would be useless, and we have already extended our quotations from the preceding chapters of the work to too great a length to permit us to present those sections entire.

Dr. T. concludes his treatise with the following practical deductions from his previous inquiries, as expressing truths in regard to diseases that are as frequent as they have been hitherto little understood.

"1. That amenorrhœa is often the result of subacute ovaritis, sometimes the result of the uterine engorgement which it determines.

"2. That dysmenorrhœa is often the result of morbid ovulation, and often a symptom of ovarian peritonitis. That frequently, subacute ovaritis, by determining the inflammatory swelling of the neck of the womb, is a mediate cause of dysmenorrhœa; the painful symptoms being, in many instances, produced by the partial closure of the neck of the womb, and the consequent effusion of menstrual secretion into the peritoneum.

"3. That, in many cases of menorrhagia, it is subacute ovaritis, which, by some unexplained process, disposes the engorged uterus to let the vital fluid run to waste.

"4. That subacute ovaritis, by inducing cerebro-spinal reflex action, in certain predisposed subjects, is the most probable cause of hysteria."

We have endeavoured, as far as possible, to present to our readers, from the details furnished by Dr. Tilt, the history of the symptoms and pathological anatomy of the two more prominent forms of ovarian inflammation, in order that their attention may be directed to the further investigation of diseases of daily occurrence, that have heretofore too much escaped the attention of the practitioner. The inconvenience and sufferings to which these diseases give rise have been most commonly ascribed to a morbid condition of the womb, of the exact character of which few appear to have any very precise idea. The neglect with which the pathology of the ovaries has been heretofore treated appears to be, in some degree, owing to the fact that the inflammatory

conditions of these organs are often secondary to disease of the uterus, while in a still greater number of cases they give rise to affections of the latter organ, by the prominence and ready diagnosis of which the primary disease is in a measure masked. But the chief cause of our little acquaintance with ovarian disease—especially the subacute form of ovaritis—has been the utter neglect of manual exploration in its investigation. In our opinion, the work of Dr. T. is one calculated to do much good. By collecting, and arranging in a systematic form, the facts and observations in relation to the affections of which he treats, that are scattered through the records of our profession, he deserves our thanks. And by the additional observations he has furnished, and the views he has advanced—even although we may not be able to coincide in the correctness of all of them—he has unquestionably prepared the way for a more accurate acquaintance with ovarian pathology, and a more rational management of some of the most distressing and heretofore unmanageable of the diseases of the reproductive organs in the female.

D. F. C.